

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the amendment and the following remarks.

Claim 1 has been amended to include the elements of previous claims 5 and 9. Claim 7 has been amended to include the elements of previous claims 1 and 5. Claim 8 has been amended to include the elements of previous claims 1 and 5. Claim 17 has been amended to include the elements of previous claims 1 and 16. Newly added claim 30 is based on the portion of the specification corresponding to paragraphs 0141 and 0142 of the published application, as well as well as Figs. 1, 5, 8 and 9. Accordingly, no new matter has been entered by this amendment.

Claims 9-15 and 18-29 stand withdrawn as being directed toward non-elected subject matter. Applicants note that the withdrawn claims depend directly or indirectly from all elected claims. Once the subject matter of the elected claims has been determined to be allowable, then the withdrawn claims should also be allowed.

Claims 1-8, 16 and 17 were objected to for various informalities relating to clarity. Those informalities having been addressed by way of this amendment renders this objection moot.

Claims 1-8, 16, and 17 were rejected, under 35 USC §102(b), as being anticipated by Komiya et al. (2002/0042035). To the extent the rejections may be deemed applicable to the amended claims, the Applicants respectfully traverse as follows.

The invention as set forth in each of independent claims 1, 7, 8 and 17 is to a hydrogen generator. The generator is comprised of a first tubular wall element; a second tubular wall

element located outside and coaxially with the first tubular wall element; and a tubular water evaporator located within the tubular walls. A tubular reforming catalyst body is also located between the first and second tubular wall elements. The generator further includes a water inlet and a gas feed inlet, wherein the water inlet and the feed gas inlet are configured to inject water and feed gas through their respective inlets so as to contact the tubular water evaporator at a location separate from one another.

Komiya discloses a single-pipe cylinder type reformer. Komiya's Fig. 1 shows the reformer in the form of a cross-sectional diagram. This figure shows that water is injected through an inlet 20, then flows through channel 25 toward a gap that spans the circumference of cylindrical wall 62. At the same time, gas is injected through inlet 26, and also flows toward that same gap. As such, the water and gas are mixed together, flowed around wall element 62 and into the gap, with the mixture then being passed into the pre-heat layer 51a.

The Komiya device differs from the invention of claim 1 in that the Komiya reformer does not include a second tubular wall located outside of and coaxially with a first tubular wall and a third tubular wall inward of and coaxial to the first tubular wall, such that combustion gas can flow in a tubular space between the first and third walls, with a width equalizing means being arranged to reduce variation in width of the combustion gas passage, thereby equalizing the width over an entire region in a circumferential direction of the combustion gas passage. Since Komiya lacks this structure, the reference fails to suggest the invention of claim 1.

The Komiya device also differs from the invention of claim 7 in that the Komiya reformer does not include a second tubular wall located outside of and coaxially with a first tubular wall and a third tubular wall inward of and coaxial to the first tubular wall, such that

combustion gas can flow in a tubular space between the first and third walls, with a gap formed between an upper end of the third tubular wall and a lid that closes an upper end of the first tubular wall, and with a burner being located in an internal space of the third tubular wall such that combustion gas generated by the burner flows from an interior portion of the third tubular wall and into a combustion gas passage through the gap. Since Komiya lacks this structure, the reference fails to suggest the invention of claim 7.

The Komiya device also differs from the invention of claim 8 in that the Komiya reformer does not include a second tubular wall located outside of and coaxially with a first tubular wall and a third tubular wall inward of and coaxial to the first tubular wall, such that combustion gas can flow in a tubular space between the first and third walls, with the first tubular wall having a combustion gas outlet through with the combustion gas can flow through a combustion gas passage to the outside of the reformer. Since Komiya lacks this structure, the reference fails to suggest the invention of claim 8.

The Komiya device also differs from the invention of claim 17 in that the Komiya reformer does not include a second tubular wall located outside of and coaxially with a first tubular wall and a third tubular wall inward of and coaxial to the first tubular wall, such that combustion gas can flow in a tubular space between the first and third walls, with a tubular cover being configured to cover the second tubular wall to form a double-walled pipe with the second tubular wall, such that reformed gas can flow from a reforming catalyst through a tubular space between the second tubular wall and the tubular cover. Since Komiya lacks this structure, the reference fails to suggest the invention of claim 17.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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